

ABSTRACT OF THE DISCLOSURE

A SCI controller manages responses and requests between SCI interconnection rings and memory access controllers. The SCI controller includes a request activation queue that stores information about the requests until the SCI rings have the resources to handle the requests. The controller also has a response activation queue that stores information about the responses until the memory access controller is accessible. The queues do not store the request and response packets, but rather store information that is used to construct the request and response packets. The SCI controller also has a contents addressable memory or CAM that checks for an address match between the current requests and responses and previous requests and responses. A table stores more specific information about the previous requests.